CLAIMS

What is claimed is:

1. A method for detecting drive anomalies, comprising:

(a) verifying data is written to a media upon an occurrence of a write operation;

(b) performing a data block integrity test by reading data from a single drive during an occurrence of a read operation; and

(c) performing a location check by reading data from said single drive during said occurrence of said read operation, wherein a data persistency verification is not performed during said read operation.

2. The method as claimed in claim 1, wherein said data persistency verification determines whether data is written to said media.

3. The method as claimed in claim 1, wherein a random read performance is increased by removing the requirement of reading a form of metadata from a second drive.

4. The method as claimed in claim 1, wherein said data block integrity test ensures that data has been retrieved properly.

5. The method as claimed in claim 1, wherein said location check ensures that data has been retrieved from a correct physical location.

6. A method for detecting drive anomalies, comprising:

(a) verifying data is written to a media upon an occurrence of a write operation;

(b) performing a data block integrity test by reading data from a single drive during an occurrence of a read operation; said data block integrity test employing a parity error detection algorithm; and

(c) performing a location check by reading data from said single drive during said occurrence of said read operation, said location check including the comparison of a location tag with an expected value, wherein a data persistency verification is not performed during said read operation.

7. The method as claimed in claim 6, wherein said data persistency verification determines whether data is written to said media.

8. The method as claimed in claim 6, wherein a random read performance is increased by removing the requirement of reading a form of metadata from a second drive.

9. The method as claimed in claim 6, wherein said data block integrity test ensures that data has been retrieved properly.

10. The method as claimed in claim 6, wherein said location check ensures that data has been retrieved from a correct physical location.

11. The method as claimed in claim 6, wherein said parity error detection algorithm is a cyclic redundancy check.

12. A method of detecting drive anomalies during a read operation, comprising:

(a) reading data from a single drive into a cache memory;

(b) generating a first parity error information set for a data read from said drive;

(c) comparing a second parity error information set with said first parity error information set; and

(d) comparing a location tag with an expected value, wherein a data integrity test and location check is performed by reading data from said single drive.

13. The method as claimed in claim 12, wherein data has been retrieved correctly from said single drive when said first parity error information set matches said second parity information set.

14. The method as claimed in claim 13, wherein said second parity error information set is stored as metadata.

15. The method as claimed in claim 13, wherein said first parity error information set and said second parity error information set are cyclic redundancy check information.

16. The method as claimed in claim 12, wherein data has been retrieved from a correct physical location when said location tag matches said expected value.

17. The method as claimed in claim 16, wherein said location tag provides an indication of an address range associated with a data block.

18. The method as claimed in claim 17, wherein a range of said address range is flexible.